

(12) **United States Patent**  
**St. Clair**

(10) **Patent No.:** **US 9,535,596 B2**  
(45) **Date of Patent:** **Jan. 3, 2017**

(54) **THREE-DIMENSIONAL GESTURES**

(75) Inventor: **Luke St. Clair**, Redmond, WA (US)

(73) Assignee: **Facebook, Inc.**, Menlo Park, CA (US)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 77 days.

(21) Appl. No.: **13/557,868**

(22) Filed: **Jul. 25, 2012**

(65) **Prior Publication Data**

US 2014/0028572 A1 Jan. 30, 2014

(51) **Int. Cl.**  
**G06F 3/0488** (2013.01)

(52) **U.S. Cl.**  
CPC ..... **G06F 3/0488** (2013.01); **G06F 3/04883** (2013.01); **G06F 2203/04101** (2013.01); **G06F 2203/04808** (2013.01)

(58) **Field of Classification Search**  
USPC ..... 345/173; 715/863  
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2010/0020035	A1 *	1/2010	Ryu et al. ....	345/173
2010/0295781	A1 *	11/2010	Alameh et al. ....	345/158
2011/0115821	A1 *	5/2011	Huang et al. ....	345/660
2011/0164029	A1 *	7/2011	King et al. ....	345/419
2012/0249443	A1 *	10/2012	Anderson et al. ....	345/173
2013/0055150	A1 *	2/2013	Galor .....	715/784

\* cited by examiner

*Primary Examiner* — Sahlu Okebato

(74) *Attorney, Agent, or Firm* — Baker Botts L.L.P.

(57) **ABSTRACT**

In one embodiment, a method includes identifying a three-dimensional gesture made by a user of a computing device with respect to one or more surfaces of the computing device, the three-dimensional gesture comprising a trajectory in three dimensions, a first portion of the trajectory comprising a touch of one or more of the surfaces, a second portion of the trajectory comprising a series of points in space distant from the surfaces; determining a user input based on the three-dimensional gesture; and executing one or more actions based on the user input.

**18 Claims, 14 Drawing Sheets**

